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| 10/799,243      | 03/11/2004  | Chikara Ishizaka     | 81864.0033          | 8197             |

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EXAMINER

SHEEHAN, JOHN P

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1742

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/799,243

Applicant(s)

ISHIZAKA ET AL.

Examiner

John P. Sheehan

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE    MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5 and 6 is/are pending in the application.
- 4a) Of the above claim(s)        is/are withdrawn from consideration.
- 5) ☐ Claim(s)        is/are allowed.
- 6) ☒ Claim(s) 1-3, 5 and 6 is/are rejected.
- 7) ☐ Claim(s)        is/are objected to.
- 8) ☐ Claim(s)        are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on        is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No.       .
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. <u>      </u> .                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/06 &amp; 7/06</u> .   | 6) <input type="checkbox"/> Other: <u>      </u> .                          |

**DETAILED ACTION.**

***Information Disclosure Statement***

1. The information disclosure statement filed May 22, 2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Applicants have not provided a copy of Japanese Patent Document No. 2002-234151. The Examiner has considered each of the other references cited in the IDS.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 to 3, 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. In claim 1, line 12, each of the phrases, "said R-T-B alloy powder" and "said R-T alloy powder" lack a clear antecedent.

***Claim Interpretation***

4. Applicants are advised that in claim 5, lines 7 and 8, the phrase, "4% or less by weight (excluding O) of Co", has been interpreted by the Examiner to mean that the cobalt content is greater than zero but does not exceed 4%.
5. There is no language in the applicants' claims to preclude the presence of Zr from the high R alloy recited in the claimed process. Accordingly, the instant claims are considered to encompass (1) the embodiment wherein both the high and low R alloys contain Zr and (2) the embodiment wherein only the low R alloy contains Zr.
6. Additionally, in view of the fact that there is no language in the claims that precludes the R rich alloy from containing boron and the use of the open terminology "containing" (claim 1, line 14) used to describe the R rich alloy, the claims are considered to encompass the embodiment wherein the R rich phase contains boron.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 to 3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (Yamamoto, US Patent Application Publication 2002/0007875 A1).

Yamamoto teaches a method of making a sintered rare earth-transition metal-boron permanent magnet using a two-alloy method. Yamamoto teaches specific examples that, with the exception of the chill roll speed, are encompassed by claims 1-3 and 6 (pages 5 and 6, Examples 3-2 and 3-4). Although Yamamoto teaches the use of strip casting to make the main phase alloy (page 5, paragraph 0068, line 7), Yamamoto is silent as to the chill roll speed. It is noted that in Example 3-4 the Zr is present in both the high and low R alloy. As explained above, under the heading Claim Interpretation, applicants' claims encompass such an embodiment. Yamamoto teaches a finished sintered product having a composition that overlaps the composition recited in applicants' claim 5 (page 3, paragraph 0043).

Yamamoto and the claims differ in that Yamamoto is silent with respect to the chill roll speed used in the strip casting step and Yamamoto does not teach the exact same composition as is recited in applicants' claim 5.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the determination of the appropriate chill roll speed to use to strip cast the mother alloy for the purpose of Yamamoto's invention is considered to be within the skill of one ordinary skill in the art.

Regarding applicants' claim 5, it is the Examiner's position that, the composition of Yamamoto's sintered alloy product overlaps the instantly claimed proportions recited in claim 5 and therefore Yamamoto's product is considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to

select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages”, In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

9. Claims 1 to 3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takebuchi et al. (Takebuchi, US Patent No. 5,595,608, cited in the IDS submitted July 12, 2006).

Takebuchi teaches a method of making a sintered rare earth-iron-boron alloy comprising forming a main phase alloy powder and boundary layer alloy powder, mixing these two powders, compacting the powder mixture and sintering the compacted powder (column 21, line 40 to column 22, line 58). Takebuchi's teaches that the main phase alloy has a  $R_2T_{14}B$  crystal structure (column 7, line 67) and can contain Zr (column 8, lines 40 to 45) as is recited in the instant claims. This main phase alloy contains 26 to 32 wt% rare earth while the grain boundary phase contains 32 to 60 wt % rare earth (column 10, lines 30 to 40). Thus, Takebuchi's grain boundary phase alloy can contain more rare earth than Takebuchi's main phase alloy as is recited in the instant claims. Takebuchi teaches specific chill roll speeds that are encompassed by the instant claims (columns 23 and 24, Table 1). Takebuchi teaches a sintered magnet

composition that overlaps the composition recited in applicants' claims 5 (column 14, lines 45 to 50) which can further contain Zr (column 8, lines 40 to 45).

Takebuchi and the claims differ in that Takebuchi does not teach the exact same chill roll speeds and final sintered magnet composition as is recited in the instant claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because Takebuchi's chill roll speeds and sintered rare earth-iron-boron magnet composition overlap the instantly claimed chill roll speeds and the sintered rare earth-iron-boron magnet composition as recited in applicants' claim 5 and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages”, In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

### ***Rejections based on Serial No. 10/676,797***

Claims 1 to 3, 5 and 6 are directed to an invention not patentably distinct from claims 1 to 6 of commonly assigned 10/676,797. Specifically, these two sets of claims are, with the exception of the chill roll speed directed to the same invention. '797

teaches that the main phase alloy is made by strip casting (specification of 797, page 15). The determination of the appropriate chill roll speed to use to strip cast the mother alloy for the purpose of Yamamoto's invention is considered to be within skill of one ordinary skill in the art.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned 10/675,797, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

10. Claims 1 to 6 provisionally rejected under 35 U.S.C. 103(a) as being obvious over copending Application No. 10/675,797 which has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the copending



application, it would constitute prior art under 35 U.S.C. 102(e) if published or patented. This provisional rejection under 35 U.S.C. 103(a) is based upon a presumption of future publication or patenting of the conflicting application. See the obvious double patenting rejection set forth above.

This provisional rejection might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by a showing of a date of invention for the instant application prior to the effective U.S. filing date of the copending application under 37 CFR 1.131. This rejection might also be overcome by showing that the copending application is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

### ***Response to Arguments***

11. Applicant's arguments filed May 22, 2006 have been fully considered but they are not persuasive.

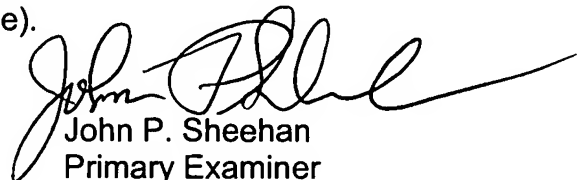
Applicants' argument that Yamamoto does not teach the chill roll speed recited in the instant claims is not persuasive. The determination of the appropriate chill roll speed to use to strip cast the mother alloy for the purpose of Yamamoto's invention is considered to be within skill of one ordinary skill in the art.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John P. Sheehan  
Primary Examiner  
Art Unit 1742

jps